PERITYPHLITIC ABSCESS

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PERFORATION OF THE APPENDIX VERMIFORMIS,

WITH REMARKS UPON

THE SURGICAL TREATMENT THEREOF,

BY

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SURGEON TO BELLEVUE HOSPITAL, NEW YORK.

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By J. W. S. GOULEY, M.D., Surgeon to Bellevue Hospital, New York.

I have the honor to call this Society's attention to the subject of perityphlitic abscess and its surgical treatment, and beg leave to begin with the narration of a case in point.

Mr. ——, æt. 37, had for two years been under my care with a right oblique inguinal hernia, for which he was wearing a truss. At times he could not endure the pressure, and either got a new truss or had the old one altered. On two occasions, the hernia became irreducible, but yielded to rest in the horizontal posture, and to hot fomentations, and in a couple of days he was able to wear his truss and resume his occupation.

In course of conversation his wife reminded him that, two years before his present illness, he had swallowed one of his teeth, which had been accidentally broken, but he was sure that he had never since experienced any ill consequence, and had even forgotten the fact.

With the exception of the inconvenience caused by his hernia, he was always in excellent health until June, 1873. On the 13th of that month he was, as he thought, again troubled by his hernia, which he could not reduce, and complained at first of some uneasiness, but afterwards of unusual pain in the right inguinal region, and in the iliac fossa of the same side. Hot fomentations this time gave but slight relief, and he was obliged to resort to anodynes to soothe his pain and obtain sleep. Rigor, followed by febrile reaction. Bowels constipated; cathartic. In spite of nutritious diet, tonics, stimulants, etc., he rapidly lost strength and flesh, and remained in that state until early in July, when he ate and slept better, suffered less, and began to

gain strength. In the meantime a swelling which had formed in the right iliac fossa, was gradually increasing; but it was still very hard. No fluctuation could be detected. The patient lay on his back, with the right leg drawn up, and supported by a pillow. There was little change in his condition from this until the end of July, when he was able to go out of town. During the first few days of his stay in the country, he felt still better and stronger, and was well enough to walk about in the house. He was, however, soon again obliged to go to bed on account of a new accession of pain. The swelling increased rapidly, filled the whole iliac fossa, and extended even beyond the median line. He then had much febrile reaction, suffered greatly, and finally became quite delirious. In the middle of August, the abscess opened spontaneously at about two inches to the right of the median line and one inch and a half above Poupart's ligament. The discharge was fetid, but not profuse, as the opening was small. The physician under whose observation he was did not ascertain whether there was any foreign body in the pus discharged then or afterwards.

From the moment the pent-up pus found issue, the patient began to improve, and in October he was able to come to town and to call upon me, though the parts were not entirely healed. In December all discharge ceased, and cicatrization appeared complete. Mr. —— remained well until about the 1st of February, 1874, when he was again attacked with pain in the right iliac region, which swelled as before, but this did not disable him, and he continued to attend to business.

On February 21st, while out of town, he was suddenly seized with excruciating pain at the seat of the swelling, which all that he took failed to relieve. He came home at once, and sent for me on the following day. I found him in great agony, and lying on his back, with the right leg drawn up. He had vomited several times, but the hernia was not down. Morphia was given internally, and hot fomentations were applied at the seat of pain. The next day he suffered less. The tumor had increased considerably, and extended upwards to the level of the umbilicus, and laterally from the iliac crest to about one inch to the left of the median line. Obscure deep fluctuation could be felt. I accordingly advised immediate incision as for ligature of the external iliac artery.

On February 24, Dr. Willard Parker saw him in consultation,

and agreed with me as to the propriety of the operation, but advised delay.

On February 27, fluctuation was very distinctly felt, especially at the seat of the old cicatrix. I then proposed to operate forthwith. To this Dr. Parker assented. The patient having been etherized, I made an incision six inches in length parallel to and one inch and a half above Poupart's ligament, cutting down, layer by layer, to the fascia transversalis, and freely laid open the abscess, from which about a pint and a half of very fetid flaky pus escaped. Neither in this nor in the washings of the cavity was there any foreign body; but, in dressing the wound, just as I was about to put in the first pledget of lint, I found at the bottom an oblong fecal concretion about the size of a bean. Afterwards, on cutting it open and carefully examining it, I found in it nothing like a fragment of tooth. The cavity was then filled with lint, to ensure slow union by granulation. The wound was dressed once a day, and healed completely towards the middle of May, when the patient was able to go out. His hernia has not since descended, and has given him no trouble. But as a precautionary measure, he still wears a truss. He is now (January, 1875) in excellent health.

REMARKS.

There are, in this case, points of sufficient interest to merit a few comments.

Was the abscess, directly or indirectly, caused by the hernia? If the hernial sac had contained a portion of the cœcum and appendix, the abscess would have pointed in the inguinal canal; as it did not, it is not probable that the hernia was a direct factor in the causation of the trouble. But did it operate indirectly in the production of the abscess—that is, had the pressure of the truss anything to do with the occurrence of typhlitis? It has been stated that undue pressure of a truss can cause this accident, and a case is reported in which such pressure is said to have caused a perityphlitic abscess. This seems possible only when the appendix happens to be adherent at or near the internal abdominal ring, or is included in the contents of the hernial sac.

I am unable to give a positive answer to the question relating to the broken tooth, because such a foreign body might have passed out when the abscess opened spontaneously while the patient was at a distance. I am sure, however, that nothing like

a fragment of tooth could be found in the discharges after I had made the incision. A tooth, or almost any other small foreign body, might well remain lodged in the appendix and create no irritation for a long time, but finally cause ulceration and its train of consequences, or might remain indefinitely in this situation without doing any harm. In his excellent essay on "*Abscess and other Diseases Consequent upon the Lodgment of Foreign Bodies in the Appendix Vermiformis*," published in the *New York Journal of Medicine*, November, 1856, Dr. George Lewis refers to the case of a man who died at the age of eighty-eight, and whose appendix vermiformis was found to contain one hundred and twenty-two robin shot. During life, Dr. Lewis says, this man had never had any symptoms indicating disease of this organ. It appears that he was excessively fond of game, and that the shot found in the appendix were supposed to have been contained in the game eaten.—(Quoted from the *New England Medical Journal*, 1843).

There are numerous instances on record where, from the character of the foreign body extracted, it is evident that it must have been imprisoned in the appendix for a long time before giving rise to typhlitis.

Another point of interest and practical import in this case is the recurrence of perityphlitis after a lapse of nearly six months. It is questionable here whether the deeper parts had entirely healed before the cicatrization of the skin. What happened is, I think, something similar to that which we constantly observe taking place in cases of necrosis of the long bones, where a few spicula of dead bone escape after the opening of the abscess; the skin then heals over, and in a few months a new abscess is formed and bursts; more pieces of dead bone are cast off, the cloaca again closes, and this process is repeated at longer or shorter intervals, until the surgeon intervenes, makes a free incision and extracts the whole of the dead bone, when the wound finally cicatrizes firmly from its base.

Dr. E. Krackowizer tells me that in 1862 he saw a patient who suffered from perityphlitic abscess four consecutive times during that year. The first abscess was lanced by Dr, Voss, and healed in a short time; the others all opened spontaneously—the last giving issue to pus in which was found a pear or an apple seed; from that time, the orifice healed firmly, and since then the patient has been perfectly well. In this case, the foreign body had pro-

bably, like a sequestrum, been imbedded in the tissues, and had caused the recurrent abscesses.

In the case of my patient, from the size and shape of the fecal concretion found in the wound, there is no doubt that it had escaped through a perforation in the appendix vermiformis, and from its color, consistency, and strong fecal odor, there is as little doubt that it had recently passed out of the intestine. But whether it emerged through a new perforation, or through an old one still unhealed, is not easy to decide. However, it seems probable that the old ulceration had not yet firmly healed. Be this as it may, it is of the greatest importance, even in case of spontaneous opening of the abscess, to make a free incision, a careful search for the foreign body, then cleanse the cavity and fill it with lint, to be renewed every day, and thus ensure slow union by granulation from the bottom. The wound ordinarily closes in from three to six weeks, but in the case under consideration it was about ten weeks in healing. Such slow union may be considered advantageous. But when there is an obstinate fecal fistula, it may be inferred that the perforation is in the cœcum, and not in the appendix. Not long since, I witnessed a case of this kind, in which several attempts had been made to close the fistula, but had failed.

The prognosis of this affection is very bad, especially in typhlitis stercoralis, where the foreign body drops into the peritoneal cavity. In case of intra-peritoneal abscess, circumscribed by adhesions, and in the true perityphlitic or sub-peritoneal abscess, timely surgical interference affords the best chance of success

Dr. Parker states that if the patient live over five days, it may be inferred that sufficient adhesions have formed to circumscribe the pus till it accumulates in large enough quantity to break through them. (See p. 19 of Dr. W. T. Bull's essay on "Perityphlitis, reprinted from the *New York Medical Journal*, September, 1873).

Of the forty-seven cases tabulated by Dr. Lewis, forty-six died, and one only recovered. In the majority there was general peritonitis, and in most of the others the pus was circumscribed. The patient who recovered was reported as a case of inguinal hernia of the cœcum with the appendix adherent to the floor of the inguinal canal. These facts were afterwards verified on post-mortem examination—the patient having died of another disease one month after the wound had cicatrized. In this case, the abscess, which

had pointed in the inguinal region, was lanced, and "a small triangular bit of bone was discharged."

Dr. Bull gives (p. 11) an analysis of sixty-seven cases of perityphlitis, which exhibits the following results: twenty-eight cases of opening of the abscess externally through the abdominal walls; fifteen of opening into the cœcum; eight into the peritoneal cavity; two into the thorax; two into the rectum; two into the bladder; two into the internal iliac artery; one causing chronic peritonitis; six dying of pyæmia; one not ascertained. Of these sixty-seven cases (p. 21), thirty-four recovered and thirty-three died. The causes of death were: peritonitis in eight cases; pyæmia in six; hemorrhage from erosion of the internal iliac artery in two; empyema in two; hemorrhage from the incision made to let out pus in one; exhaustion in thirteen; cause not ascertained in one Exhaustion appears to have been the most frequent cause of death in these cases, and has occurred oftenest in those where the abscess opened externally. Early incision would probably do much toward decreasing such mortality.

Many contributions to our knowledge of this subject have been made, both at home and abroad, but I preferred to quote from the papers of Dr. Lewis and Dr. Bull, as they embody all the essential points in the history, etiology, pathology, and treatment of this grave affection These two monographs are, I think, well worthy of the most careful perusal.

Incision as for Ligature of the Iliac.—Dr. Lewis, in 1856, proposed, as a rule of practice, early incision of the abscess as it is now done, and though he had never himself performed the operation, he related a successful case (operated upon by Mr. Hancock, of London), which he thought might well serve as a precedent. (See *New York Journal of Medicine*, November, 1856, pp. 345–347.) The case to which he referred was published in the *London Medical Gazette*, 1848, and in the *American Journal of Medical Sciences*, 1849; and Dr. Lewis gives an abstract of it in his own essay. In commenting upon the operation, Dr. Lewis says: "If resorted to at all, the opening should be made early. If the symptoms are urgent and threatening, it must not be delayed on account of the absence of fluctuation." Too much haste in cutting is not judicious, and it is questionable whether the operation should be done before the seventh or eighth day.

Dr. Willard Parker is entitled to great credit for having

recalled the attention of the profession to this method of treatment, and for suggesting its more general adoption. Two cases of perityphlitic abscess, successfully treated by incision by Dr. Parker, were published in the *Medical Record* of March and June, 1867.

Besides these, and my own and Mr. Hancock's cases, twenty-one others, as far as I know, have been treated by incision by the following named sugeons:

Stiegle (case 4, in Dr. Bull's table), one case;

Dr. L. Weber, (*New York Medical Journal*, 1871), one case;

Dr. E. Krackowizer (case 5, in Dr. Buck's table), one case;

Dr. H. B. Sands (*New York Medical Journal*, August, 1874), one case;

Dr. Chas. Kelsey (*Medical Record*, Oct. 1st and Dec. 15th, 1874), two cases;

Dr. S. B. Ward (*Medical Record*, November 2d, 1874), one case;

Dr. Samuel Whitall (*Medical Record*, May, 1874), one case;

Dr. J. P. P. White (case 9 in Dr. Buck's table), one case;

Dr. Gurdon Buck (case 10, in table contained in paper read to New York Academy of Medicine, September, 1874), one case;

Dr. J. R. Wood (note p. 16 in Dr. Buck's pamphlet), three cases—one died;

Dr. J. C. Hutchison, Brooklyn (communicated by operator), two cases;

Dr. R. B. Bontecou (Trans. N. Y. State Med. Society, 1873, p. 137), three cases—one died;

Dr. Charles A. Leale (communicated by operator), two cases;

Dr. J. H. Pooley, Yonkers (*Medical Record*, April 17, 1875).

Making in all twenty-five operations, with two deaths. These are all the cases treated by incision, as above described, that have so far come to my knowledge; but it is more than probable that since 1867, when attention was recalled to the importance of early incision, many surgeons have resorted to the operation who have not yet given publicity to their experiences. It is hoped, however, that they will soon do so, and aid in popularizing this most valuable and life-saving mode of treatment.